Dear Educator,

This file contains the Safety Data Sheets (SDS) for FOSS ELECTROMAGNETIC FORCE, NEXT GENERATION as of July 24, 2017.

Because kit contents can sometimes be replaced, we recommend searching our online portal of SDS for current sheets as you need them. To make that searching easier, we have provided a listing below of the items with SDS in this kit.

Portal: http://www.schoolspecialty.com/sds

<table>
<thead>
<tr>
<th>Part Number to Search</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>020-9152</td>
<td>Batteries-D cell</td>
</tr>
<tr>
<td>032-3168</td>
<td>Iron filings, coarse</td>
</tr>
</tbody>
</table>

Note: The part numbers to search for in the portal are often not the same part numbers used to order replacements. To order replacements, please visit www.deltaeducation.com/refillcenter

If you have any questions, please contact Customer Care at 800-258-1302 for assistance.
PRODUCT SAFETY DATA SHEET

PRODUCT NAME: Eveready / Energizer Battery

Type No.: Volts:

TRADE NAMES: ENERGIZER, ENERGIZER e², INDUSTRIAL ZMA, HERCULES, EVEREADY, WONDER

CHEMICAL SYSTEM: Alkaline Manganese Dioxide-Zinc

Approximate Weight:

Designed for Recharge: No

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

SECTION 1 - MANUFACTURER INFORMATION

Energizer Battery Manufacturing, Inc.
25225 Detroit Rd.
Westlake, OH 44145

Telephone Number for Information:
800-383-7323 (USA / CANADA)

Date Prepared: March 2015

SECTION 2 – HAZARDS IDENTIFICATION

GHS classification: N/A

Signal Word: N/A

Hazard Classification: N/A

Under normal conditions of use, the battery is hermetically sealed.

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

Inhalation: Contents of an open battery can cause respiratory irritation.

Skin Contact: Contents of an open battery can cause skin irritation and/or chemical burns.

Eye Contact: Contents of an open battery can cause severe irritation and chemical burns.

SECTION 3 - INGREDIENTS

IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

<table>
<thead>
<tr>
<th>MATERIAL OR INGREDIENT</th>
<th>PEL (OSHA)</th>
<th>TLV (ACGIH)</th>
<th>%/wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (CAS# 7782-42-5)</td>
<td>15 mg/m³ TWA (total dust)</td>
<td>2 mg/m³ TWA (respirable fraction)</td>
<td>2-6</td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ TWA (respirable fraction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manganese Dioxide (CAS# 1313-13-9)</td>
<td>5 mg/m³ Ceiling (as Mn)</td>
<td>0.2 mg/m³ TWA (as Mn)</td>
<td>30-45</td>
</tr>
<tr>
<td>Potassium Hydroxide (CAS# 1310-58-3)</td>
<td>None established</td>
<td>2 mg/m³ Ceiling</td>
<td>4-8</td>
</tr>
<tr>
<td>Zinc (CAS# 7440-66-6)</td>
<td>15 mg/m³ TWA PNOR* (total dust)</td>
<td>10 mg/m³ TWA PNOC** (inhalable particulate)</td>
<td>12-25</td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ TWA PNOR* (respirable fraction)</td>
<td>3 mg/m³ TWA PNOC** (respirable particulate)</td>
<td></td>
</tr>
</tbody>
</table>

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Non-Hazardous Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>TLV Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>None established</td>
<td>18-22</td>
</tr>
<tr>
<td>Water, Paper, Plastic</td>
<td>None established</td>
<td>Balance</td>
</tr>
</tbody>
</table>

* PNOR: Particulates not otherwise regulated
**PNOC: Particulates not otherwise classified

SECTION 4 – FIRST AID MEASURES

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.

Inhalation: Provide fresh air and seek medical attention.

Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

To cleanup leaking batteries:

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries.

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery.

Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container.

SECTION 7 - HANDLING AND Storage

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: If the Eveready / Energizer Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

WARNING: do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury. Replace all batteries at the same time.

Where accidental ingestion of small batteries is possible, the label should include:
Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Requirements: Not necessary under normal conditions.
Respiratory Protection: Not necessary under normal conditions.
Eye Protection: Not necessary under normal conditions.
Gloves: Not necessary under normal conditions.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state, color, etc.)</td>
<td>Solid object</td>
</tr>
<tr>
<td>Upper Explosive Limits</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Lower Explosive Limits</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Odor</td>
<td>No odor</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 25°C)</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No odor</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>2.0 – 3.0</td>
</tr>
<tr>
<td>Melting point/Freezing Point</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Solubility in Water (% by weight)</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Boiling Point @ 760 mm Hg (°C)</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not applicable for an Article</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable for an Article</td>
</tr>
</tbody>
</table>

SECTION 10 – STABILITY AND REACTIVITY

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.
SECTION 11 – TOXICOLOGICAL INFORMATION

Under normal conditions of use, alkaline batteries are non-toxic.

SECTION 12 – ECOLOGICAL INFORMATION

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and landfilling.

SECTION 14 – TRANSPORT INFORMATION

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as “Dry cell” batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Goods Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

<table>
<thead>
<tr>
<th>Regulatory Body</th>
<th>Special Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN</td>
<td>Not regulated</td>
</tr>
<tr>
<td>US DOT</td>
<td>49 CFR 172.102 Provision 130</td>
</tr>
<tr>
<td>IATA</td>
<td>A123</td>
</tr>
<tr>
<td>ICAO</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

SECTION 15 – REGULATORY INFORMATION

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

SECTION 16 – OTHER INFORMATION

None.

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1 Identification

- **Product identifier**
  - **Trade name**: Iron Fillings, Course
  - **Article number**: 060-0313
  - **CAS Number**: 7430-80-6
  - **EC number**: 231-090-4

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier**: Aqua Solutions, Inc.
    0913 Highway 225
    DEER PARK, TX 77536
    USA
    800-256-2586
  - **Information department**: Product safety department
    Technical Coordinator
    Sherman Nelson sherman@aquasolutions.org
  - **Emergency telephone number**: Chemtrec: 800-424-8390
    Canada: 913-966-6666

2 Hazard(s) Identification

- **Classification of the substance or mixture**
  The substance is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
  - GHS label elements: Not Applicable
  - Hazard pictograms: Not Applicable
  - Signal word: Not Applicable
  - Hazard statements: Not Applicable

- **Precautionary statements**
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If swallowed: Call a poison center/doctor if you feel unwell.
  - If on skin: Wash with plenty of water. Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system**
  - **NFPA ratings (scale 0 - 4)**
    Health: 0
    Fire: 0
    Reactivity: 0

  - **HMIS-ratings (scale 0 - 4)**
    HEALTH: 0
    FIRE: 0
    REACTIVITY: 0

- **Other hazards**
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

(Contd. on page 2)
3 Composition/Information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  7439-89-6 Iron Metal
- Identification number(s)
- EC number: 231-096-4

4 First-aid measures

- Description of first aid measures
  - General information: No special measures required.
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Generally the product does not irritate the skin.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed. No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  Suitable extinguishing agents:
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture. No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Precautions for safe handling No special measures required.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Iron Filings, Course

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Powder, ribbon, chips or granules
      - Color: Silver or grey
      - Odor: Odorless
      - Odor threshold: Not determined.
    - pH-value: Not applicable.
  - Change in condition
    - Melting point/Melting range: 1335 °C (2445 °F)
    - Boiling point/Boiling range: 2750 °C (4982 °F)
  - Flash point: Not applicable.
  - Flammability (solid, gaseous): Product is not flammable.
  - Ignition temperature:
    - Decomposition temperature: Not determined.
    - Auto ignition: Not determined.
  - Danger of explosion: Product does not present an explosion hazard.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Vapor pressure: Not applicable.
  - Density at 20 °C (68 °F): 7.81 g/cm³ (165.675 lbs/gal)
  - Bulk density at 20 °C (68 °F): 2900 kg/m³
  - Relative density: Not determined.
  - Vapour density: Not applicable.

(Contd. of page 2)
Safety Data Sheet
acc. to OSHA HCS

Printing date 11/11/2014 Reviewed on 03/12/2014

Trade name: iron Filings, Course

(Con’d of page 3)

- Evaporation rate: Not applicable.
- Solubility in / Miscibility with Water: Insoluble.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  Dynamic: Not applicable.
  Kinematic: Not applicable.
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- LD/LC50 values that are relevant for classification:
  Oral [LD50] 7500 mg/kg (rat)
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eyes: No irritating effect.
  - Sensitization: No sensitising effects known.
  - Additional toxicological information:
    When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.
  - Carcinogenic categories
    - IARC (International Agency for Research on Cancer) Substance is not listed.
    - NTP (National Toxicology Program) Substance is not listed.
    - OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes: Generally not hazardous for water
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

(Con’d on page 5)
Safety Data Sheet
acc. to OSHA HCS

Trade name: Iron Filings, Coarse

- Other adverse effects: No further relevant information available.

(Contd. of page 4)

13 Disposal considerations
- Waste treatment methods
  - Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information
- UN-Number
  - DOT, ADN, IMDG, IATA: Not regulated
- UN proper shipping name
  - DOT, ADN, IATA: Not regulated
  - IMDG: Not Regulated
- Transport hazard class(es)
  - DOT: Not applicable
  - Class: Not regulated
  - ADN/R Class: Not regulated
- Packing group
  - DOT, IMDG, IATA: Not regulated
- Environmental hazards:
  - Marine pollutant: No
- Special precautions for user: Not applicable.
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.
- Transport/Additional information:
  - DOT
    - Remarks: Not regulated
  - IMDG
    - Remarks: Not regulated
  - IATA
    - Remarks: Not regulated
  - UN "Model Regulation": Not regulated

15 Regulatory information
- Sajen, health and environmental regulations/legislation specific for the substance or mixture
- Sata
- Section 355 (extremely hazardous substance): Substance is not listed.
- Section 313 (specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is listed.
- Proposition 65
  - Chemicals known to cause cancer: Substance is not listed.
  - Chemicals known to cause reproductive toxicity for females: Substance is not listed.
  - Chemicals known to cause reproductive toxicity for males: Substance is not listed.

(Contd. on page 5)
Safety Data Sheet
ace. to OSHA HCS

Trade name: Iron Filings, Coarse

- Chemicals known to cause developmental toxicity: Substance is not listed.
- Carcinogenic categories
  - EPA (Environmental Protection Agency) Substance is not listed
  - TLV (Threshold Limit Value established by ACGIH) Substance is not listed
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements Not Applicable
- Hazard pictograms Not Applicable
- Signal word Not Applicable
- Hazard statements Not Applicable
- Precautionary statements
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If swallowed: Call a poison control doctor if you feel unwell.
  - If on skin: Wash with plenty of water.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Environment protection department.
- Contact: Mr. Nelson
- Date of preparation / last revision
  Creation date for SDS 08-20-2014.
  Revised 03/2/2014.
- Abbreviations and acronyms:
  -ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  -IMDG: International Maritime Code for Dangerous Goods
  -DOT: US Department of Transportation
  -IATA: International Air Transport Association
  -ACGIH: American Conference of Governmental Industrial Hygienists
  -ESIS: European Inventory of Existing Commercial Chemical Substances
  -CAS: Chemical Abstracts Service (division of the American Chemical Society)
  -NFPA: National Fire Protection Association (USA)
  -HMIS: Hazardous Materials Identification System (USA)
  -LC50: Lethal dose, 50 percent
  -LD50: Lethal dose, 50 percent